'Caught in the Cubbany river some 30 miles above Nanjangud on a hand line 400 yards in length. Its dimensions as soon as landed were as follows :—

Length including tail from nose to the end of tail	60 inches
Greatest girth	38 do.
Circumference inside lips	24 do.
Weight	130 lbs.

1870.'

MYSORE GOVERNMENT MUSEUM, CURATOR.
Bangalore,
March 13, 1928.

XX.—APHIDIDÆ OF MYSORE

In the following note on the Aphididæ of Mysore, a few of the common forms have been recorded and features of special interest described. A number of other Aphids, some of them rare and probably belonging to new species remain to be recorded. An account of them will be published on a future occasion.

It will be noticed that out of the four forms usually met with in Aphids, only two, the winged and unwinged viviparous, parthenogenetic forms have been touched upon in this note. As is usually the case in tropical countries, the true sexual, oviparous forms appear to be absent in Mysore, although, these forms have been observed in parts of India, which enjoy a temperate climate and where snowy winters occur.

Confirmation of my identifications and a few other determinations have been obtained from Mr. F. V. Theobald, Agricultural College, Wye, Kent, and Mr. P. M. Mason, of the United States Bureau of Entomology, to whom I tender my acknowledgments. Finally I desire to acknowledge the encouragement and help given to me by Dr. Coleman, the Director of Agriculture in Mysore, and by Dr. Kunnhi Kannan, Entomologist.

1. *Aphis gossypii*, Glover

Theobald (African Aphididæ, *Bull Ent. Research*, vol. iv, 1913-14, p. 322) states that this species is subject to great variation in colour ranging from pale greenish-yellow to almost black. The prevailing colours in Mysore are as follows :—

Young	... Yellowish
Pupa	... Brownish.
Apterous female	... Green or pale green.
Alate female	... Thorax, black ; abdomen, pale yellow or greenish-yellow.

Das (The Aphididæ of Lahore : 1918) has stated that this species shows more distinct mottling than others. This is so in Mysore. The pattern on the abdomen of the alate female, however, differs from that he has noted. There are present black streaks in the middle of 1st to 4th, abdominal segments ; a central large black patch on the 6th, 7th and 8th segments and a rectangular patch above the anal plate on the ventral surface. Das also mentions that the sensoria on the III antennal article number from 6-8 but usually

there are 7; here a few varieties, e.g., on *Guyava*, show only 5–6. Some apterous females of this species in Mysore, e.g.,those on *Shorea talura*, have longer, and those on *Solanum nigrum*, have shorter antennæ than the antennæ of corresponding alate females. Usually, also, the alate females are smaller in size and more delicate, whereas the apterous females are big and stout.

Some individuals of this species, occurring on *Solanum nigrum* in Mysore, show the presence of lateral tubercles not only on the prothorax and 1st and 7th abdominal segments, but also on 2nd, 3rd and 4th abdominal segments.

Host plants.—A. gossypii in Mysore has been found to occur on the following plants, almost all the year round :—

Shorea talura (Jalari), *Psidium guyava* (Seebè), *Hibiscus rosa-sinensis* (Dasala), *Ocimum sanctum* (Tulsi), *Butea frondosa* (Muttuga), *Solanum nigrum* (Kari-Kachi), *Solanum melongenum* (Brinjal), *Tectona grandis* (Teak) *Capsicum fluoscence* (Chillies), *Gossypium herbaceum* (Cotton). Only occasionally this insect assumes the status of a minor pest on cotton and brinjal.

2. *Rhopalosiphum pseudobrassica*, Davis

This insect has been found in Mysore, in conjunction with another, viz. *Myzus persicæ*, Sulz., which is the common species present on tobacco and cabbage.

Das (Aphididæ of Lahore : 1918) has named anew the Aphis collected on mustard and called it *Siphocoryne indobrassica*. The mustard aphis in Mysore differs from Das's new species only very slightly and also nearly coincides with *Aphis pseudobrassica* of Davis. It is probable that the mustard aphis of Mysore is identical with *Siphocoryne indobrassica*, Das, of which, possibly, Mason was not aware.

Host plant.—Brassica nigra (Mustard). The flower stalks, tender twigs and leaves are usually heavily infested. In cases of severe attack, curling and discolouration of leaves and a decidedly unhealthy look of the plant as a whole have been noticed. *R. pseudobrassica* is found mostly during the monsoon months.

3. *Aphis maidis*, Fitch

The general body colour of this insect-green, and the elongated narrow body, specially that of the apterous female and small long brownish cornicles (Longer in apterous than in alate females) are especially characteristic in Mysore. This same insect has been found by Das on wheat, maize, oats and others.

The two branches of the cubitus of the fore wings are very short. The III antennal article bears usually 14–15 and the IV article 4–5 secondary sensoria. This seems to be a rare feature among the more commonly occurring species of Aphis here.

Host plant.—Eleusine corucana (Ragi). The crop in the field has not so far been noticed to be seriously affected ; but ragi grown in the pot culture house in the laboratory has more than once been observed to be badly infested and the plants had to be sprayed in time to prevent serious damage.

4. *Pentalonia nigrinervosa*, Ckll.

Only apterous insects, and not alate ones, have yet been noticed in Mysore. Colonies occur inside the rolled-up tender leaves of *Musa*, specially during the monsoon months. A few differences from Baker's description of the genus *Pentalonia* have been noted. The cornicles show little constriction in the middle but the distal extremity is swollen. The frontal tubercles do not seem to be *Myzus*-like and they do not converge so much as in *Myzus* and the hairs present on the tubercles of *Myzus* are absent here.

The abnormal wing venation which is said to be peculiar to this insect could not be observed here, as winged individuals were not found.

Das has not mentioned this insect.

Host plant.—Musa sapientum (plantain).

5. *Aphis rumicis*, Linn.

Both the alate and apterous individuals, along with the young ones of different stages, are covered in varying degrees, with a whitish meal in such a way as to present distinct patterns on the surface, this being especially so in the adults, A few young ones of 2nd or 3rd moults did not show the presence of the meal, but looked ferruginous brown. Unlike *Aphis medicaginis*, Koch, found on other leguminous plants, this insect has a more pronounced, greenish tinge on the abdomen. The alate female is also brownish at the sides. The apterous females have a shining appearance.

This insect occurs very commonly in Mysore, densely covering leaf and fruit stalks and also the fruits, of the plants attacked.

Host plant.—Vigna catiang (cow-pea) ; almost all the year round.

6. *Toxoptera aurantiæ*, Boyer

This insect seems to occur only rarely in Mysore, having so far been noticed only once, in 1921 during the monsoon season.

In Great Britain, Europe and America, this has very generally been found on orange but so far in Mysore it has not been found on orange or any other Citrus variety. Neither has Das collected this on orange in Lahore.

The only other Toxopteran species found here till now is on *Dalbergia sissu* and that is different from *T. aurantiæ*.

Altogether, the genus *Toxoptera* is represented in Mysore very poorly and probably by very few species in the whole of India. Das has noted only 3 species, namely *T. graminum*, Rond, *T. cyperi*, V. D. Goot, and *T. punjabipyri*, Das.

Host plant.—Albizzia odoratissima (Bilvaradamara).

7. *Aphis medicaginis*, Koch.

This insect, described by Das as occurring mostly on leguminous plants, has been said to be warm reddish-brown in colour (specially apterous females). But here the apterous female of the same species is deep bluish-black or green, the alate female having a greenish abdomen, brown thorax and head with antennæ, tibia, cornicles and cauda, pale green, and coxa of legs brownish. There are 6–7 sensoria on the III antennal article of alate female, whereas

Das mentions only 5–6. There is much shining of the body in sunlight in apterous females. The latter are also very stout.

Host plant :—*Dolichos lablab* (Avare), *Crotalaria*.

On lablab, the insect is found almost all the year round, more so on the climber variety, where it occurs in dense colonies doing serious damage.

8. *Aphis tavaresi*, Del Guercio.

This species has not been recorded by Das in Lahore. He mentions *A. malvas* as occurring on the same food plant (*Citrus*).

The chief varieties of *Citrus* on which this insect is found in Mysore are :—

Citrus aurantium, (limes and oranges).

Heavy infestation is occasionally noticed after the rains and after new shoots are put forth. The honey-dew of the vast number of the individuals covers the leaves, facilitating the growth of the black fungus (*Capnodium brasiliense*). Usually the more tender parts of the plants are most subject to infestation.

9. *Aphis nerii*, Fonsc.

This yellow Aphid, with dark cornicles and cauda and red compound eyes, is common in Mysore. Das has found it in Lahore on many host plants, but here it has been observed till now only on *Calotropis gigantea* (Yukka).

10. *Aphis sacchari*, Zehnt.

This insect has been listed by Das in his ' Aphididæ of Lahore.' In the foot-note in connection with *A. sacchari*, Van der Goot says that he has placed *A. sacchari* in a new genus called *Longiungis*. Baker, in his Bulletin, has put down *Longiungis* as only a synonym of *Aphis*.

Host plant :—*A. sacchari* has been found in Mysore only sparingly on *Sorghum vulgare* (Jola); only apterous forms have so far been found.

11. *Therioaphis ononidis*, Kalt.

The Aphid occurring on the same host plant as the one named below has been described by Das in his volume under *Callipterus trifolii*, Monell.

A few differences in structural characters have been observed in *T. ononidis* occurring in Mysore. There are only seven oval (not sub-circular) double-ringed sensoria on the III antennal articles of both a late and apterous females. The cauda is knobbed and projects beyond the anal lobes which are not entirely divided but only bilobed ; the anal lobes are not long and narrow but short.

Host plant :—*Medicago sativa* (Lucerne). Lucerne is the sole foodplant on which this insect has been collected both in Mysore and in other parts of India. This must, no doubt, be the same as the well-known clover-aphis of the Western countries.

12. *Myzus persicae*, Sulz.

This insect has sometimes been found in combination with *Rhopalosiphum pseudobrassica* on mustard.

Host plants:—*Nicotiana tabacum* (Tobacco), *Brassica oleracea* (cabbage).

Whenever these are grown in Mysore, the colonies of *M. persicæ* are found on both surfaces and in and around tender curled-up leaves. On tobacco, specially, it has very often become a serious pest with the result that a number of cultivators in Mysore have regularly requested spraying with fish-oil-resin soap or tobacco decoction.

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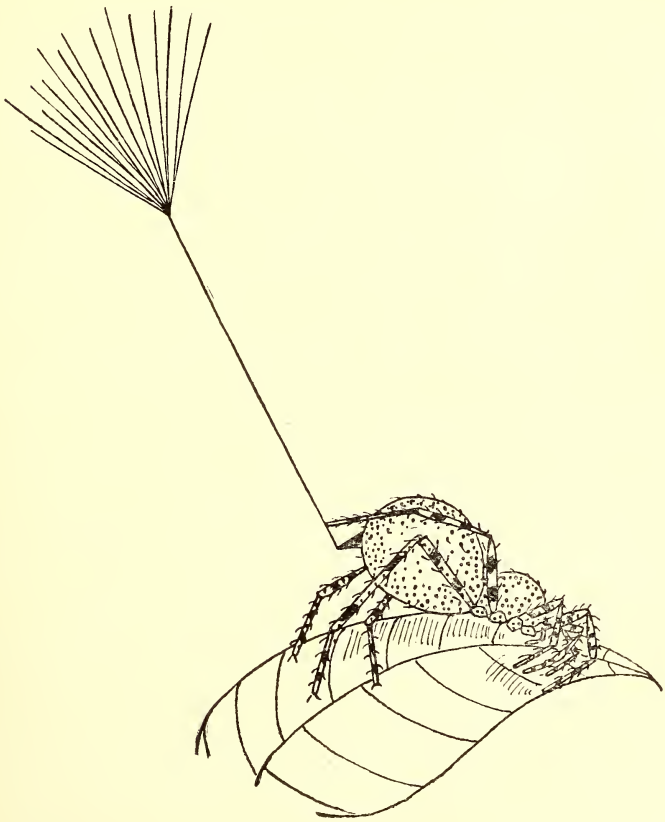
BANGALORE.

XXI—'MIGRATION' OF SPIDERS

(With a text-figure)

It was a hot day towards the end of summer in Mesopotamia as I lay under a date-palm just outside the precints of a desert town,



THE SPIDER AND ITS PARACHUTE.